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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/077,447	02/15/2002	Stefan Kotter	00-1-242	3138

7590 10/02/2003
Robert F. Clark
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EXAMINER

KEANEY, ELIZABETH MARIE

ART UNIT PAPER NUMBER

2882

DATE MAILED: 10/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/077,447	KOTTER ET AL.	
	Examiner	Art Unit	
	Elizabeth Gemmell	2882	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 February 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 10-31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☒ Claim(s) 2,3 and 7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-9, drawn to a ceramic arc tube, classified in class 313, subclass 573.
- II. Claims 10-25, drawn to an apparatus for making an arc tube, classified in class 445, subclass 66.
- III. Claims 26-31, drawn to the method of making an arc tube, classified in class 445, subclass 26.

The inventions are distinct, each from the other because of the following reasons:

Inventions Group I and Group II are related as apparatus and product made.

The inventions in this relationship are distinct if either or both of the following can be shown: (1) that the apparatus as claimed is not an obvious apparatus for making the product and the apparatus can be used for making a different product or (2) that the product as claimed can be made by another and materially different apparatus (MPEP § 806.05(g)). In this case, the arc tube could be made within a low-pressure sealing chamber with resistive heating elements.

Inventions Group I and Group III are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1)

that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case, the arc tube could be made by simultaneously filling the chamber with a buffer gas while heating the RF susceptor.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group II is not required for Group III, restriction for examination purposes as indicated is proper.

During a telephone conversation with Bob Clark on 18 September 2003 a provisional election was made with traverse to prosecute the invention of Group I, claims 1-9. Affirmation of this election must be made by applicant in replying to this Office action. Claims 10-31 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one

or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

Claim 2 and 3 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. In Claim 2, the applicant discloses the gas pressure range from 2-10 bar. This exceeds the range in Claim 1 of 2-8 bar. Claim 3 discloses a gas pressure range exceeding 10 bar, which is not included in the range of 2-8 bar.

Claim 7 is objected to because of the following informalities:

- The group "argon, krypton, xenon or a mixture thereof" is an alternative expression and should therefore be in the form of a Markush grouping,

reciting members as being "selected from the group consisting of A,B and C". See MPEP §2173.05h.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,2 and 7-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Born et al. (US Patent 6,137,230; hereinafter Born).

Re claim 1: Born discloses, in figure 2 and throughout the disclosure, a ceramic arc tube comprising:

- a discharge vessel (3) having at least one capillary having an electrode assembly (4),
 - the capillary extending outwardly from the discharge vessel to a distal capillary end,

- the electrode assembly being hermetically sealed to the distal capillary end with a frit material (10; column 2, lines 57-59),
- the electrode assembly passing through the capillary to the discharge chamber and being connectable to an external source of electrical power (8),
- the discharge vessel enclosing a discharge chamber containing a buffer gas and an ionizable fill material, wherein the pressure of the buffer gas is between 2-8 bar (column 3, lines 60-67).

Re claim 2: Born discloses the buffer gas pressure from 2-20 bar (column 3, lines 60-67).

Re claim 7: Born discloses the buffer gas being chosen from the group consisting of argon, krypton, xenon or a mixture thereof (column 3, lines 63).

Re claim 8: Born discloses the buffer gas comprising xenon (column 3, line 63).

Re claim 9: Born discloses the buffer gas pressure from 2-10 bar (column 3, lines 60-67).

Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Scholl et al. (US Patent 5,382,873; hereinafter Scholl).

Re claim 1: Scholl discloses, in figure 2 and throughout the disclosure, a ceramic arc tube comprising:

- a discharge vessel (11) having at least one capillary having an electrode assembly (14),
 - the capillary extending outwardly from the discharge vessel to a distal capillary end,
- the electrode assembly being hermetically sealed to the distal capillary end with a frit material (column 5, line 25),
- the electrode assembly passing through the capillary to the discharge chamber and being connectable to an external source of electrical power (16),
- the discharge vessel enclosing a discharge chamber containing a buffer gas and an ionizable fill material (column 5, lines 45-54).

Re claim 3: As best understood by the examiner, Scholl discloses the buffer gas pressure to exceed 10 bar (column 3, lines 30-41).

Claims 1 and 4-6 are rejected under 35 U.S.C. 102(e) as being anticipated by Lapatovich (US Patent 6,566,817).

Re claim 1: Lapatovich discloses, in figure 8 and throughout the disclosure, a ceramic arc tube comprising:

- a discharge vessel (40) having at least one capillary (48) having an electrode assembly (42),
 - the capillary extending outwardly from the discharge vessel to a distal capillary end,
- the electrode assembly being hermetically sealed to the distal capillary end with a frit material (50; column 3, line 17),
- the electrode assembly passing through the capillary to the discharge chamber and being connectable to an external source of electrical power (20),
- the discharge vessel enclosing a discharge chamber containing a buffer gas and an ionizable fill material (column 2, lines 78-65).

Regarding the limitation "the pressure of the buffer gas being from 2 bar to 8 bar", Lapatovich's lamp is a high intensity discharge lamp and thus it is considered to have a gas pressure of 2-8 bar.

Re claim 4: Lapatovich discloses the discharge vessel is comprised of a sapphire tube (column 3, line 10) and the capillary is comprised of a polycrystalline alumina (column 3, line 15).

Re claim 5: Lapatovich discloses the capillary is part of an end cap which has been hermetically sealed to the sapphire tube (column 3, line 17).

Re claim 6: Lapatovich discloses, in figure 8 and throughout the disclosure, the end cap having an annular rim (44) which fits over an open end of the sapphire tube.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elizabeth Gemmell whose telephone number is (703) 305-1937. The examiner can normally be reached on Monday-Thursday 6:30-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (703) 308-4858. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


emg


EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER